Abstract

ABSTRACT

BACKGROUND

Crestal bone loss around dental implants on initial loading can be influenced by gingival biotype. Platform switching minimize crestal bone loss resulting from implant-abutment union. The purpose of the present study was to clinically and radiographically evaluate the changes in the hard and soft tissue on platform switching endosseous implant on thick and thin gingival biotype in single edentulous site over a period of one year time.

MATERIALS AND METHODS

A total of 16 systemically healthy patients with a single edentulous site were enrolled in this study and endosseous implants were placed. A total of 16 implants were placed (8 in thick group and 8 in thin group). The relative position of marginal gingiva and relative width of keratinized gingiva was assessed at the time of implant placement ,at the time of loading and 6 months after loading. Radiographic assessment was done for changes in the marginal bone levels at the mesial and distal side of the implant in the both groups at the time of implant placement(baseline),at the time of loading (at 6 months) and 6 months after loading (12 months) using radiograph. All these parameters were statistically analysed using Mann-Whitney test to compare thick and thin group, Friedman test for repeated measures used to compare values between

three time points and were considered to be significant of the p value was $\leq$ 0.05.

RESULTS

Sixteen patients were enrolled in the present study, 8 in the thick group and 8 in the thin group and endosseous implants were placed.14 subjects were followed up throughout the study period and two patients were excluded from the study.

On intragroup comparison, no significant difference was seen in the mean relative position of marginal gingiva and mean relative width of keratinized gingiva in thick and thin biotype at baseline, at 6 months and at 12 months.

On intergroup comparison, no significant difference was seen in the relative position of marginal gingiva but statistically significant difference was seen at 6 months and 12 months between thick and thin biotypes.

On intergroup comparison, no significant difference was seen in relative width of keratinized gingiva between thick and thin biotypes at baseline, at 6 months and at 12 months.

The difference in mean crestal bone level between thick and thin group, thin biotype shown more bone resorption over a period of one year.

Intragroup comparison, statistically significant difference was seen in crestal bone level in both groups at 6 months and at 12 months.

Intergroup comparison statistically significant difference was seen in crestal bone level at the time of loading.

CONCLUSION

Within the limitations of the study, it can be concluded that while platform switching concept seems to preserve soft tissue around the implant, it provides no additional benefits in preventing crestal bone loss in patients with thin biotype.

KEYWORDS

A COMPARATIVE CLINICAL STUDY, PLATFORM SWITCHING IMPLANTS, CRESTAL BONE LOSS, GINGIVAL BIOTYPE.